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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/827,018	04/19/2004	Peter Brian Hrejsa	DDM04-010	2512

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LAW OFFICE OF DONALD D. MONDUL
3060 Bonsai Drive
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EXAMINER

JIANG, CHEN WEN

ART UNIT PAPER NUMBER

3744

DATE MAILED: 05/16/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/827,018

Applicant(s)

HREJSA ET AL.

Examiner

Chen-Wen Jiang

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>20040430</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-18 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Temple et al. (U.S. Patent Number 6,571,566).

In regard to claims 1-15 and 18, Temple et al. disclose a method of determining refrigerant charge level in an air-conditioning system. Referring to Fig.6, the system comprises a compressor 18, a condenser 12, an evaporator, first sensor 90 measuring the temperature within the condenser, second sensor 28 measuring the temperature liquid refrigerant and microcontroller 94. Subcooling is computed by subtracting the liquid refrigerant temperature measured by sensor 28 from the condenser refrigerant temperature measured by sensor 90. The refrigerant charge level determination algorithm determines the refrigerant charge level based on the input from sensors. Temple et al. disclose when the predicted charge level is outside of the desired range, the offset from normal charge level is computed and a charge level adjustment is indicated to the user. A service technician or other user can add or subtract refrigerant charge to bring the charge level within acceptable limits. Therefore, the access fittings are inherent in the charging device to make the adjustment.

In regard to claims 16 and 17, it is well settled that it is not “invention” to broadly provide a mechanical or automatic means to replace manual activity which has accomplished the same result or vice versa. In re Rundek, 18 CCPA 1290, 48 F.2d 958, 9 USPQ 220.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Houser Jr. (U.S. Patent Number 4,484,452) in view of Inoue (JP 03195829).

Houser Jr. discloses an air-conditioning charge control system. Referring to Fig.1, the system comprises a compressor 13, a condenser 12, an evaporator 11, fitting 16e, refrigerant vessel 21, controller 28 temperature sensors and pressure sensors. Superheating and subcooling strategies are employed to maintain the charge level in the circuit at optimum performance level. Additional control strategy is employed to shift refrigerant charge into and out of the circuit transient operations. Under the principals of inherency, if a prior art device, in its normal and usual operation, would necessarily perform the method claimed, then the method claimed will be considered to be anticipated by the prior art device. When the prior art device is the same as a device described in the specification for carrying out the claimed method, it can be assumed the device will inherently perform the claimed process. *In re King*, 801 F.2d 1324, 231 USPQ 136 (Fed. Cir. 1986). Houser discloses the invention substantially as claimed. However, Houser does not disclose claimed subcooling calculation. Inoue discloses subcooling based on the

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temperature difference between refrigerant temperature measured by sensor 11 from the condenser refrigerant temperature measured by sensor 12 in the same field of endeavor for the purpose of calculating subcooling. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the apparatus of Houser with a subcooling calculation in view of Inoue so as to have alternative subcooling estimate.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chen-Wen Jiang whose telephone number is (571) 272-4809.

The examiner can normally be reached on Monday-Thursday from 8:00 to 6:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cheryl Tyler can be reached on (571) 272-4834. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Chen-Wen Jiang
Primary Examiner

A handwritten signature in black ink, consisting of a series of loops and a long horizontal stroke, positioned to the right of the printed name.